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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,518	07/12/2002	Joe F. Zhou	42390.P9657	2646

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John P Ward
Blakely Sokoloff Taylor & Zafmann
7th Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025

EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,518

Applicant(s)

ZHOU ET AL.

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to amendments filed 09/17/04.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

1. Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

2. Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).

- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

There is no header "Brief Summary of the Invention". Correction is required.

The specification retains objected to because no header, "Brief summary of the invention" has been provided. Even though a heading is not required, it nonetheless helps structure the disclosure so as to become easier to read. As such header is necessary to make the disclosure easier to read.

3. *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 8, 10-18, 22-24, 27-30, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marchisio (US 6510406) in view of Fogg et al. (US 6163778) (Fogg).

Regarding claims 1 and 22, Marchisio discloses: A method and a machine-readable medium that provides instructions comprising:

receiving a search term for a query (102, fig. 10 and corresponding text,

Marchisio);

searching a network of concept terms for terms related to the search term, the related terms representing a variety of terms having a relatively close relationship with the search term (104, fig. 10 and corresponding text, Marchisio);

reformulating the query using the search term and the related terms, without performing a search for documents based on the search term(106, fig. 10 and corresponding text, Marchisio);

searching a local database for data terms that match the search term and the related terms (22, fig. 2 and corresponding text, Marchisio). However, Marchisio didn't disclose: wherein the data terms are generated from documents residing on websites located on servers across a network based on a predetermined relationship between the search term and the related term and in response to the data terms found in the local database, retrieving the documents from the websites whose data terms match the search term and the related terms. On the other hand, Fogg discloses: wherein the data terms are generated from documents residing on websites located on servers across a network based on a predetermined relationship between the search term and the related term (col. 11, lines 34-59, Fogg) and in response to the data terms found in the local database, retrieving the documents from the websites whose data terms match the search term and the related terms (col. 11, lines 34-47, Fogg). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include wherein the data terms are generated from documents residing on websites located on servers across a network based on a predetermined relationship between the search term and the related term and in response to the data terms found in the

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local database, retrieving the documents from the websites whose data terms match the search term and the related terms in the system of Marchisio as taught by Fogg. The motivation being to enable the search engine determines the relevance of a document based on the search terms input by a user, the search term relevance and document rating as stored in database is combined to produce a weighted average relevance ranking for a document then display the results page complete with hypertexted links for the web pages contained in the database (col. 11, lines 34-59, Fogg).

Regarding claims 2 and 23, all the limitations of these claims have been noted in the rejection of claims 1 and 22 above, respectively. In addition, Marchisio/Fogg discloses: further comprising displaying the retrieved documents, the search terms and the related terms, wherein at least one of the related terms includes a link, when activated, a further search of concept terms is conducted and one or more further related terms are presented, and wherein searching the local database and retrieving the documents are iteratively performed based on the further related terms (col. 11, lines 34-47, Fogg).

Regarding claims 3 and 24, all the limitations of these claims have been noted in the rejection of claims 1 and 22 above, respectively. In addition, Marchisio/Fogg discloses: further comprising generating a summary of the documents for the searched terms that match the search term and the related terms (col. 11, lines 34-47, Fogg).

Regarding claim 4, all the limitations of this claim have been noted in the rejection of claim 3. In addition, Marchisio/Fogg discloses: wherein the summary

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includes the searched terms and a beginning portion of the documents (col. 11, lines 34-47, Fogg).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Marchisio/Fogg discloses: wherein the network is the Internet (col. 16, lines 59-67, Marchisio).

Regarding claim 8, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Marchisio discloses: wherein related terms are more specific than the search term (col. 17, lines 34-46, Marchisio).

Regarding claims 10 and 27, all the limitations of these claims have been noted in the rejection of claims 1, 2. It is therefore rejected as set forth above. In addition, Marchisio discloses: displaying results of the searching of the local database, and displaying the search term and the related terms (col. 11, lines 34-47, Fogg).

Regarding claims 13 and 30, all the limitations of these claims have been noted in the rejection of claims 10 and 27 above, respectively. In addition, Marchisio/Fogg discloses: wherein reformulating the new query includes combining the new search term and the new related terms together using search operators (col. 17, lines 33-47, Marchisio).

Regarding claim 14, all the limitations of this claim have been noted in the rejection of claim 13. In addition, Marchisio/Fogg discloses: wherein the search operators are selected from the group consisting of AND, OR, NOT and NEAR (col. 17, lines 33-46, Marchisio).

Regarding claims 11 and 28, all the limitations of these claims have been noted in the rejection of claims 10 and 27 above, respectively. However, Marchisio/Fogg didn't disclose: wherein receiving the search term for the query includes receiving the search term for the query based on the displaying of the search term and the related items in a prior process (col. 17, lines 33-46, Marchisio).

Regarding claims 12, 16 and 29, all the limitations of these claims have been noted in the rejection of claims 10, 15 and 27 above, respectively. In addition, Marchisio/Fogg discloses: wherein the new search term is a related term from a prior search of the network of concept terms (col. 17, lines 33-46, Marchisio).

Regarding claims 15, all the limitations of these claims have been noted in the rejection of claims 1, 10. It is therefore rejected as set forth above.

Regarding claim 17, all the limitations of this claim have been noted in the rejection of claims 15 and 13 above. It is therefore rejected as set forth above.

Regarding claim 18, all the limitations of this claim have been noted in the rejection of claims 17 and 14 above. It is therefore rejected as set forth above.

Regarding claim 33, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Marchisio/Fogg discloses: wherein the data terms are generated based on mutual information associated with the search term and the related terms using a predetermined algorithm (col. 17, lines 8-21, Marchisio).

Regarding claim 34, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Marchisio/Fogg discloses: wherein the mutual information is determined based on one or more weight factors of the search term and the related terms, the

one or more weight factors representing occurrence frequencies of the respective search term, related terms and a combination of both search term and the related terms (col. 17, lines 46-53, Marchisio).

Regarding claim 35, all the limitations of this claim have been noted in the rejection of claim 34 above. In addition, Marchisio/Fogg discloses: wherein the mutual information (MM of the search term x and the related terms y is determined by $M1(x, y) = f(x,y) / f(x) + f(y) - f(x, y)$, wherein $f(x, y)$ corresponds to an occurrence frequency of both search term and the related terms, wherein $f(x)$ corresponds to an occurrence frequency of the search term, and wherein $f(y)$ corresponds to an occurrence frequency of the related terms. (col. 17, lines 8-21, Marchisio).

5. Claims 6, 7, 9, 19-21, 25, 26, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marchisio (US 6510406) in view of Fogg et al. (US 6163778) (Fogg) and further in view of Braden-Harder et al. (U.S 5933822) (Braden).

Regarding claims 6 and 25, all the limitations of these claims have been noted in the rejection of claims 1 and 22 above, respectively. However, Marchisio/Fogg didn't disclose: wherein the network of concept terms includes links between related terms, wherein the links are based on semantic relationship. On the other hand, Braden discloses: wherein the network of concept terms includes links between related terms, wherein the links are based on semantic relationship (col. 11, lines 41-60, Braden). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include links between related terms, wherein the links are

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based on semantic relationship in the combination system of Marchisio/Fogg as taught by Braden. The motivation being to provide a logical form in a method which is a directed acrylic graph in which words representing text of any arbitrary size are linked by labeled relations, a logical form portrays semantic relationships between important words in a phrase, which may include hypernyms and/or synonyms thereof.

Regarding claim 19, Marchisio/Fogg/Braden discloses an apparatus comprising: a database that includes data terms, wherein the data terms are from documents residing on websites located on servers across a network (col. 8, lines 19-30, Marchisio); a concept network that: includes search terms and related terms that are linked together based on semantic relationships (col. 11, lines 41-60, Braden), the search terms and the related terms to locate portions of the documents based on a match between the searchable term, and the related terms and the data terms stored in the database (col. 11, lines 52 to col. 12, lines 28, Marchisio).

Regarding claims 7, 20 and 26 , all the limitations of these claims have been noted in the rejection of claims 1, 19 and 22 above, respectively. In addition, Marchisio/Fogg/Braden discloses: wherein the semantic relationships are selected from a group consisting of canonical (logical form), synonym, hyponym, hypernym, part (col. 11, lines 41-51, Braden), product and member (col. 11, lines 41-51, Braden).

Regarding claim 9, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Marchisio/Fogg/Braden discloses: wherein different emphasis is placed on the related terms (col. 7, lines 35 to col. 8, lines 6, Braden).

Regarding claim 21, all the limitations of this claim have been noted in the rejection of claims 19 and 8 above. It is therefore rejected as set forth above.

Regarding claim 31, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Marchisio/Fogg/Braden discloses: wherein the related terms are different than the search term and have similar meaning to the search term (col. 11, lines 41-51, Braden).

Regarding claim 32, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Marchisio/Fogg/Braden discloses: wherein the search term includes a name of an organization, and wherein the related terms include at least one of a name of subsidiaries of the organization, a product name of the organization, and a stock symbol of the organization (col. 11, lines 41-51, Braden).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CN
Cindy Nguyen
December 22, 2004

Frantz Coby
FRANTZ COBY
PRIMARY EXAMINER